Father of the Zeppelin and Master Mind in Raid That All London Dreads

By WALTER S. HIATT.

AT last that aero raid on England has been made. Yet it was a raid, say the Germans, which only forecasts a real Zeppelin raid.

All London is awaiting it—and dreading. All England is awaiting it—and fearing. All the world is awaiting it—and wondering.

Germany's giant airships have always been surrounded by an air of mystery. They are powerful; every military man knows that. But how powerful they are is another question. There is a general feeling that Germany has not shown her hand, that she has a big surprise somewhere up her sleeve. She undoubtedly has.

Take, for instance, the silent motor. Late this last fall an American, Edgar Allen Cantrill, just happened to be in Ostend at the time of a Zeppelin raid. It was a warm, clear night, says Mr. Cantrill, with scarcely any wind. He was sitting on a bench out of doors. Suddenly he heard a faint sound that seemed at first like the noise of an approaching automobile. Little by little the sound drew overhead. Heads were craned aloft; nobody seemed to realize what the thing might really be. There was none of the sharp staccato of the aeroplane motor, and the sound was anything but warlike. Then somebody saw it, a great dim shape, swinging directly above the town, a half mile possibly above the earth.

A LIGHT IN THE SKY, A FALLING FLAME AND THEN DESTRUCTION.

There came a flare in the sky, like the striking of a match. Only this match started to fall. As it fell it grew larger, hissing in a streak of flame straight for the ground. Then it landed. There was a deafening explosion, a hasty vision of a raw pit in the ground with buildings tottering into it from every side, then a pinwheel spurt of liquid flame, spattering everywhere. The whole square was instantly afire. That was one of the dynamite oil bombs.

Now, according to Mr. Cantrill, this was on a still, clear night. The great cigar-shaped balloon could be seen plainly. And its approach could be heard. This Zeppelin was equipped with one of the older model audible motors; audible, that is, when the machine was almost straight above the city itself. The new Zeppelin motors are noiseless (and if the Germans call a thing noiseless it seems to be a fair gamble that the word can be used in its strictest sense). If an audible Zeppelin could slide over the city of Ostend on a clear, starlit night, what couldn't a fleet of silent Zeppelins do on a foggy night over London? The idea will bear thought. In England it is bearing thought.

The accusation has often enough been made against the Germans that they are literally war-mad. However true this may be, there is no question now of the fact that the whole German nation is solidly Zeppelin-mad.

CONQUEST THROUGH THE AIR AN AMERICAN MADE IDEA.

This idea of conquest through the air which has terrorized the British people since the beginning of the war was not made in Germany at all. It was made, of all places, in the United States. Count Ferdinand von Zeppelin, to-day seventy-six years old, and in 1908 dubbed by the Kaiser in an outburst of unselfish enthusiasm "the greatest German of the twentieth century," did his first military apprenticeship in the air at the age of twenty-two in the balloon corps of the Army of the Potomac. So it was during our own Civil War that he first came to appreciate the war value of air craft.

Few stories of achievement possess more romance than the heroic fight Count Zeppelin has maintained ever since those early days to build dirigibles for the purposes of war. He has faced the jeers of mankind, as did the American, Langley; he has sunk his own private fortune, together with those of his family and friends; he has sacrificed his peace of mind; a hundred times he has risked his own life. And if any one person can be said to have founded the industry of building dirigibles for commercial and war use, Zeppelin is the man. Not even the Krupp family has been more important to the fatherland.

Yet pertinacity doesn't mean dulness here. In Zeppelin's career there has been more than one dash of that sort of romance which normally belongs to the melodrama hero rather than to the prosaic engineer and plodding mechanic. In time of war he has risked his life with the very same fire and happy-go-lucky rakishness that helped him to spend for his dirigibles his share of nearly a hundred million dollars of the German government's good money. No one but an apparently hare-brained individual would have taken his part in the ballooning of the Civil War. After Professor T. S. C. Lowe had placed himself and his balloon at the disposition of President Lincoln and had sent from his aircraft the first telegram from sky to earth, balloons were sagely recognized as having a possible war value. After the defeat at Manassas one of the first who pressed for service in the dangerous business of signalling artillery fire directions from a balloon was young Zeppelin. Trained as an engineer at the Polytechnik of Stuttgart, he pleaded special knowledge, and service in the balloon corps from that time on was his.

When the Franco-Prussian War broke out young Zeppelin had no balloon for observation purposes, but with a few cavalrymen he made an advance dash into French territory that has come down through history.

RETIREMENT FROM ACTIVE MILITARY LIFE.

He continued in the cavalry for some time after the war, but in 1891 he retired as a general from active military life, returning to his birthplace and home by the side of Lake Constance. But he had no idea of settling down; it was time now to start to work. By 1892 he was devoting himself heart and soul to the science of flying.

It was not until 1900 that the first Zeppelin was launched. The money for the construction of this first Zeppelin machine was supplied by the Balloon Company, organized with a capital of $200,000, one-half of which was raised by Zeppelin himself out of his own personal funds. This sum of $200,000, incidentally, is just about the cost of a single dirigible to-day. But this amount could nowhere nearly cover the cost of the great shed which had to be built and finished before the dirigible itself could be started.

The count began building his first great shed in 1898; but instead of putting it up on land he floated it on Lake Constance, off the village of Manzel. To-day the Friedrichshafen Zeppelin factory is near this very spot. This original shed was a wooden structure, curiously pointed, floating on nearly one hundred separate pontoons. The whole affair was 450 feet long, 78 feet broad and 66 feet high; scarcely a toy.

IN THE EARLY DAYS OF ZEPPELIN BUILDING.

The first dirigible built by Zeppelin was constructed under the direction of Herr Kaubler, aided by seventy carpenters and thirty mechanics. Every piece of material was tested twice and sometimes oftener before it was permitted to enter into the construction. A Zeppelin may be built to-day easily enough within the space of a single month—this has been brought about through the standardizing of factory arrangements—and at least two may be built at the same time in even the smaller factories of Germany. In the older days, however, it was very different.

It is not too much to say that all the resources of the manufacturing Germany of that day were drawn upon by Zeppelin to assemble the varied materials and pieces which went into the making of this airship. While the manufacture of airships is now recognized, particularly in Germany, as a regular and legitimate industry, in those days Zeppelin had to make the most careful search for every material he needed. In one instance, when Zeppelin found some difficulty in controlling his great floating shed, he had to appeal to the Kaiser himself for some ship anchors. The Kaiser, be it noted, took personal care to locate a number of spare anchors in the various shipyards of the navy, ordering them sent at once to Lake Constance.

The first of the count's air vessels achieved only a partial success. Zeppelin immediately recognized certain remediable faults. He recognized, for instance, that the construction was not strong enough for the great length of the ship and that his balloons were not gas-tight. But he insisted nevertheless that he had discovered a big principle—that the advantage lies with large size because of the fact that lifting power grows as the cube of the dimensions and resistance only with the square. This principle he later elaborated in such convincing fashion that he stimulated the Germans to build the first of their present gigantic ocean liners.

It was 1905—only ten years ago—before anybody listened. Then the count managed to obtain a small amount of money with which to rebuild Zeppelin I along newer lines. He rebuilt it. Then the powers of the air took their shot at him. In January, 1906, after an 800-mile trial trip run, the balloon was caught in a windstorm and totally wrecked.

Even Zeppelin this time seems to have lost heart. For a short period he remained inactive. Then suddenly the growing number of successful flights in France and the achievements of the Wright brothers in the United States stimulated the German government to supply the count with funds for a Zeppelin III. Again Zeppelin started in. The new ship was built larger than any of his others; it was fitted with an improved 85-horsepower Daimler motor, and on its trial trip it made sixty-nine miles in two hours and a half.

THE DEVELOPMENT OF THE AIRSHIP INDUSTRY.

From this single date the airship industry of Germany may said to have been launched on its present scale. The people and the government swung over to Zeppelin as other peoples and other governments have swung through history. The Kaiser's administration, standing out firmly against the rival French idea of developing the aeroplane, the heavier-than-air machine, committed itself definitely to the ideas of Zeppelin and offered a prize of $500,000 for a ship that would remain twenty-four hours in the air and at the end of that time land without mishap. Zeppelin's years of work were at last bearing fruit.

The count himself, having reorganized his company, began work on a new balloon, Zeppelin IV. Other builders were stimulated by the government prize, and in 1907 the Gross dirigible and the far-famed Parseval I were completed. In June, 1908, the great Zeppelin IV was given its trial, to which the vessel responded with a voyage of 236 miles in twelve hours.

The German people went Zeppelin mad. The count was almost a demigod by now. And when, in August, 1908, the newest and greatest airship was destroyed by fire on the plains of Echterdingen, the whole German nation was grieved. A huge popular subscription was started, bringing the count $1,500,000 to continue his work. Zeppelin III was rebuilt and named the Zeppelin II. To this airship the German government awarded its $500,000 prize, afterward buying the vessel. With this purchase the Kaiser's empire committed itself absolutely to the airship idea that has played so large a part in the present war.

THE MADNESS OF THE GERMANS IS A PRACTICAL MADNESS.

It is not too much to say that the most capable men of Germany's army and navy have been occupied during the last three years almost solely by this single task. Their success is indicated pretty well in the published reports, which show that during these three years no less than nine hundred air voyages have been made, covering a total period of 2,000 hours in the air, giving a summed-up distance of 66,000 miles cruised and a total number of 20,000 passengers carried. The only very serious accident during this time, at least up to August, 1914, was the wrecking of a Zeppelin near Berlin a year ago last October. In this accident—an explosion in the air—twenty-eight officers were killed.

Another improvement in the Zeppelin is its practical proofing against the terrific explosions which have done such horrible damage in the past. Still another is its new lightness. The frame and cars are made now of a material far lighter than aluminum. As early as 1910 the German government refused to buy what was then the latest Zeppelin model on the ground that it was built of aluminum and that this was not the latest and lightest alloy.

Then there is another device which is worrying England almost as much as the silent motor. This is a German contrivance for launching torpedoes from dirigibles. It consists of a swinging platform so arranged that the balloon may descend close to the fleet of warships and launch a battery of torpedoes exactly as a destroyer or a submarine would do the trick. If the thing can be worked successfully—that is, if the Zeppelin squadron can fly near enough to the ships of the British—it will mean a good many uncomfortable hours for the English North Sea fleet. It may mean the possible annihilation of that fleet. What this in turn would mean all England hates even to imagine.

The feverish activity of the English government during the last two months in its hasty buying of hydro-aeroplanes and other aerial craft in both America and France may be accounted for not only because of the British fear of the burning of London, but also because of the dread of the disaster that might reach the high seas fleet through torpedoes aerially launched.

The Zeppelin terror in England is no mere nightmare; it is an actual, living fact. Any day now——

THE TEUTONIC AERIAL LITERATURE BLOOMS PROFUSELY.

And Germany is rushing ahead. During the last three years of Teutonic aerial activity a whole literature, part of it public and part secret, has grown up with it. When a literature grows up in any nation about a manufacturing pursuit it means nothing less than that this pursuit has taken a firm hold of the nation itself. Dozens of manufacturers are engaged in producing airship supplies and accessories. At least five great magnates are building the ships themselves. There are a number of types. There is the rigid Zeppelin, the non-rigid Siemens-Schuckert, the rigid Schuette-Lang, the semi-rigid Gross. Each one of the companies making these craft is backed by a capitalization ranging from $500,000 to $2,000,000. In each case the government has subscribed for part of the stock or given advance orders which are practically subsidies.

The largest airship factories are located at Friedrichshafen, on the banks of the Bodensee, at Potsdam on the Wannsee, at Mannheim and at Hanover, where the special cloth used as covering is produced. Berlin is the great distributing centre for shed builders, hydrogen supplies, lubricants, motors and other articles. We have nothing in the United States even approximating such activity and interest. Even at Cuxhaven, not far from Hamburg, at the mouth of the Elbe River, the German government itself has built up a vast and little known manufacturing centre for airship construction.

AERIAL JOURNALS, CLUBS, SCHOOLS, GROUNDS!!——

The activity in Germany is indicated fairly well, too, by the fact that even at the beginning of the war there were no fewer than twelve aerial journals, thirty-one private flying grounds for clubs or factories, thirty-two military sheds situated at various points, seventeen army flying schools and one hundred and six clubs devoted to the sport. These clubs were situated in every corner of Germany. The Emperor himself founded the Motorluftschiff Studien Gesellschaft. Another of these clubs, the Seeoffizier-Luftclub, of Wilhelmshaven, had an enormous membership, as did the Luftfahrt-Verein, at Karlsruhe. There were flying schools at Hanover, Köln, Metz, Posen and Graudenz. It is estimated that because of this interest no fewer than 2,000 men, publicly or privately trained, were available for air work at the beginning of the war. And, of course, the training is going on.

While Fred T. Jane, editor of the recently published English magazine, "All The World's Aircraft," estimates the total number or airships publicly or privately owned in Germany at twenty-seven, this number could hardly have been correct even at the beginning of the war. It is known that there are no fewer than thirty-two military sheds in Germany alone, sheds which will accommodate from one to two dirigibles apiece and act either as hangars or as refuges in times of bad weather. Here is where they are situated:

WHERE THE DEADLY WEAPONS ARE STOWED AWAY.

At Bickendorf bei Köln, Biesdorf bei Berlin, Bitterfeld, Braunschweig, Cuxhaven, Dresden (two sheds building in July), Düsseldorf, Frankfort-a-M., Friedrichshafen, Fuhlsbuttel, Germerschein (Bayern), Gotha, Hamburg, Johannisthal (two sheds for small dirigibles), Kiel, Koln, Konigsberg, Leichlingen, Leipsic, Liegnitz, Manzell, Metz, Oos (bei Baden-Baden), Posen, Potsdam, Reinickendorf (bei Berlin), Rheinau, Schwidermuhl, Strassburg, Thorn, Trier and Wanne.

When the number of these sheds is compared with that of the military sheds in France—at Toul, Belfort, Epinal, Rheims, Verdun, Issy, Pau, Maues and Maubeuge—or with the few in England, such as at Aldershot or at the Royal Aircraft factory near Farnborough, or to the small aerodromes at East Church, Isle of Sheppey, and at Cleethorpes, it may be judged how strong is the faith the Germans are pinning on their dreadnoughts of the air.

Such has been their painstaking care that there are known to be at least a dozen small dirigibles from one hundred and seventy-five to two hundred feet in length that can be stowed away and carried on a truck, like so much theatre scenery, and put together when needed in a few hurried minutes.

THE FACTORIES OF LAKE CONSTANCE AND CUXHAVEN.

While the Zeppelin factory on Lake Constance, with its thousand workmen and four hundred expert airmen, has a decided value because of its distance inland, a factory and station only second in importance to this of Count Zeppelin himself is that at Cuxhaven. This station has a different sort of advantage in distance. It is only 450 miles from London. It is also near the great port of Hamburg, where every manufacturing facility and aid may readily be obtained. Originally begun merely as a hangar, a way station, it has become the centre of aerial activity of both army and navy. To-day it is a veritable city spreading out on the prairie of Gross-Borstel.

The first hangar here was an immense affair—166 metres long, 51 wide and 32 high—and was capable of sheltering two of the largest Zeppelins, inflated, or as many as six Parsevals. This first hangar was built of iron, its bomb-proof roof supported by enormous pillars of steel. Under this roof, and entirely separated from the two inflated Zeppelins, can be sheltered two extra Zeppelins uninflated.

LONDON LIVES IN ANTICIPATION OF THE UNKNOWN.

During the last two months the airship factories of Germany have been going at it night and day. In this time no less than fifty dirigibles may have been built and completed. A fleet of fifty dirigibles is not anything to be sneered at; and the British are doing no sneering.

There are dozens of German dirigibles that can travel at the rate of forty miles an hour, and at this rate twelve hours would give them plenty of time to reach England, do their work and start home again.

London is 400 miles from Helgoland, 400 from Bremen, 300 from Dusseldorf, and 300 from Koln (Cologne).

That a real raid on London will be made at some time during the war is a certainty. How deadly a raid it will be no one outside of Germany can even guess.

That it will almost certainly be made at night has long been the opinion of most eminent authorities, among them no less a personage than Lieutenant Charles La Fon, of the French air fleet, who has made an exhaustive study of German airplanes.

And still the sword hangs over London. Every calm night, every night of the dun black fog that sinks stickily down upon the great British capital, all London shrinks and fears, while the heart of the helpless city goes dead and cold at the slightest strange flash of light, at the faintest murmur overhead. For the British know that on the other side of the drear North Sea the Germans have for months been making ready.

ENGLISH TRAWLER TO AID OF ZEPPELIN CREW.

Jersey Strikers Who Have Been Under Fire

Continued from second page.

Jerry O'Brien, of Newark, were professional gunmen from Manhattan.

Patrick F. Gill, investigator of the Federal Commission on Industrial Relations, was on the ground for three days following the shooting.

"The evidence all points one way," he said. "The shooting was unprovoked and unjustified. Most of the men were shot in the back. One was shot in the sole of his shoe. He was running and fell, and was on his hands and knees when he got his wounds. I regard the evidence of the two policemen who were first on the scene as wholly trustworthy. They, with the citizens to back them, assert that all the wounded were searched and the other strikers assembled and searched, and not a single weapon was found on any man."

Mixing with these men on the streets and in the various gathering places, the chief one being in the rear of a saloon, the note that was dominant in all their conversations and speeches was that, whatever happened, the strikers must remain quiet and peaceful.

Talking with them, one got an impression that either the men were individually above the average for day laborers, or that their leaders were wise to an extraordinary degree. Seeing them walking along the streets in groups of three to a dozen, they seemed like a lot of animals. But they gave us the sidewalks. They directed us with enthusiastic politeness, going out of their way, if necessary, to show us how to reach our destination. They did these things with a fine courtesy.

It may have been for lack of money that in two days no intoxicated striker was discovered. When they are on the job, it is said to be considered necessary for most of the men to drink a certain amount of whiskey—say half a pint a day—to cut the bone dust. That may be a clever excuse.

But the citizens of Roosevelt don't hesitate to say that whiskey is the only thing that will make them temporarily forget even the smell of the bone dust.

If whiskey is absolutely necessary, the cost should be added to such requirements as lentils and shoes, and considered by those having the settlement of this affair in their hands, in connection with a total of $9 60 a week in the way of income.

The roommate of Patty, whose wife and four children in Hungary have been notified of his death, said a man could just live, nothing more, on $1 60 a day—that is, if he was trying to get his wife and children over to this country, as Patty was when he was shot.

Three strikers in Van Ness's saloon were offered cigarettes. You can tell when a man smokes a cigarette because he wants to be polite, and when he does so for the first time after an enforced abstinence from tobacco.

The fingers of one striker visibly trembled in anticipation of the joys of a smoke. He had been shot a week before, but not seriously wounded. Dr. Pease would have reprimanded him, and probably jailed the one who was putting temptation in his way.

The three men puffed deeply, and smiled.

The one who had been shot has a wife and three children in Carteret. He was the same one who had shown such animation while reaching for the case. A moment later he hastened after the man who had passed the case around, and offered to return a cigarette which, he explained, had fallen to the ground unnoticed.

The Newark Detective Agency, that supplied the deputy sheriffs, is conducted by Jerry O'Brien. He is a professional pacifier. He bids on a job of pacification as another expert might, if requested, quote on all steel cars for the subway—so much delivered, results guaranteed. His men have delivered the goods at several strikes.

Frank P. Walsh, chairman of the federal commission investigating industrial unrest, said:

"In most states the law requires that the sheriff shall make inquiry as to the character of the men he appoints as deputies and shall select none but men of known good character and dependability. If there is no such law as that in New Jersey, and I am informed there is not, I am amazed. If there is, and it was not regarded, I should say that the sheriff merits impeachment."

Sheriff Houghton said for publication, after the shooting:

"The men did their work well. I have full confidence in them."

If you are looking for scenery, stay away from Roosevelt Borough. If Belgium does not take all your time and resources, there are sufferers in Carteret and Chrome who have smelled powder. Also, they believe they are fighting for a principle.